



# UNITED STATES PATENT AND TRADEMARK OFFICE

N ✓  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

| APPLICATION NO.                                       | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/634,222  | 08/04/2003  | Udo Linnemann        | 10901/51            | 6504             |
| 26646   | 7590        | 01/12/2005           | EXAMINER            |                  |
| KENYON & KENYON<br>ONE BROADWAY<br>NEW YORK, NY 10004 |             |                      | PYO, KEVIN K        |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2878                |                  |

DATE MAILED: 01/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/634,222             | LINNEMANN ET AL.    |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Kevin Pyo              | 2878                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 8/4/2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) All . b) Some \* c) None of:
      1. Certified copies of the priority documents have been received.
      2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 8/4/03.
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

*Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “deflector element integrated in the movably supported carrier element and including a surface of the carrier element” of claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled “Replacement Sheet” in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5, 6 and 9-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishizuka et al (5,283,434).

Regarding claims 1 and 15, Ishizuka et al shows in Fig.4A the following elements of applicant's invention: a) a scale (20); b) a scanning device (an optical encoder shown in Fig.4A excluding a scale 20) movable in relation to the scale (20) and including signal-generating devices (1, 2, 4A-4C, lenses and gratings formed on 3) configured to generate positionally dependent scanning signals, the signal-generation devices including at least one deflector element (2) configured to selectively influence a light beam propagation direction arranged on sides of the scanning device; and c) an adjustment device (5, 13) configured and positioned to spatially adjust the deflector element (col.7, lines 17-29), the adjustment device configured to enable spatial alignment of at least one deflector element independently of other signal-generating devices (the adjusting mechanism 13 is arranged to enable the deflector element 2 to be spatially aligned without having to change the spatial positions of lenses and gratings on the glass plate 3).

Regarding claim 2, Ishizuka et al discloses that an adjustment device includes a movably supported carrier element (5) and the deflector element (2) includes a mirror and is mounted on the movably supported carrier element (5).

Regarding claim 3, Ishizuka et al shows in Fig.4A the casing (5) is in cylindrical shape and has a groove portion (a chamfer is defined as a groove in the Webster's Dictionary), wherein the mirror (2) is positioned on the bottom side of the groove portion of the casing (5).

Regarding claims 5 and 6, the casing (5) can be moved closer to or moved away from the glass plate (3) in a direction along a longitudinal axis of the casing (a vertical axis which bisect 5) or the casing can be tilted with respect to the glass plate (3).

Regarding claim 9, the mirror (2) is mounted in the groove section with a reflective side (the mirror surface) oriented away from the carrier element (the right side surface of the casing 5).

Regarding claim 10, the limitation therein is shown in Fig.4A.

Regarding claims 11 and 12, the limitations therein are disclosed in col.7, lines 22-25.

Regarding claim 13, the mirror (2) can be qualified as the recited movably supported carrier element (since the mirror 2 is movable with the movement of the casing 5 and the mirror 2 has a 45 degrees inclined mirror face).

Regarding claim 14, the mirror (2) is cylindrical and includes a chamfer (an inclined mirror surface) on at least one longitudinal end.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishizuka et al.

Regarding claim 4, the specific scheme and arrangement utilized to position the mirror would have been obvious to one of ordinary skill in the art in view of design requirements and depending on the needs of the particular application.

Regarding claim 7, although the casing of Ishizuka et al does not disclose a cut-out portion, it would have been obvious to one of ordinary skill in the art to include a cut-out portion in the casing (5) in view of providing the easier reception of the adjusting element (13).

Regarding claim 8, although Ishizuka et al does not specifically mention that the mirror adhesively mounted to the casing (5), Those skilled in the art appreciate that the particular coupling scheme is well known and would have been a matter of routine design choice depending on the needs of the particular application.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Omi (5,841,133) and Speckbacher et al (6,486,467) are cited for disclosing an optical displacement detecting apparatus having a scale and a scanning device.

Art Unit: 2878

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Pyo whose telephone number is (571) 272-2445. The examiner can normally be reached on Mon-Fri (with flexible hour), First Mon. off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Porta can be reached on (571) 272-2444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin Pyo  
Primary Examiner  
Art Unit 2878

Pkk  
1/9/05